



EC-TYPE EXAMINATION CERTIFICATE

Equipment or Protective System Intended for use
in Potentially Explosive Atmospheres
Directive 94/9/EC

EC-Type Examination Certificate Number : **BAS99ATEX7061**

Equipment or Protective System: **MTL4044 REPEATER POWER SUPPLY, 2 CHANNEL:
4/20 mA, FOR 2-WIRE TRANSMITTERS**

Manufacturer: **MEASUREMENT TECHNOLOGY LIMITED**

Address: **Luton, Bedfordshire, LU1 3JJ**

This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

The Electrical Equipment Certification Service, notified body number 600 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report N°

98(C)0789 dated 17 March 1999

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:


EN 50014: 1997 EN 50020: 1994

except in respect of those requirements listed at item 18 of the Schedule.

If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment or protective system.

The marking of the equipment or protective system shall include the following:-

 II [1] G [EEEx ia] IIC (-20°C ≤ T_a ≤ 60°C)

This certificate may only be reproduced in its entirety and without any change, schedule included.

File No: EECS 0703/02/271

This certificate is granted subject to the general conditions of the Electrical Equipment Certification Service. It does not necessarily indicate that the apparatus may be used in particular industries or circumstances.

I M CLEARE
DIRECTOR
25 March 1999



Electrical Equipment Certification Service
Health and Safety Executive
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Tel: 01298 28000 Fax: 01298 28244



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EC-TYPE EXAMINATION CERTIFICATE N° BAS99ATEX7061

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Description of Equipment or Protective System

The MTL4044 Repeater Power Supply, 2 channel: 4/20mA, for 2-wire transmitters is designed to provide a d.c. floating supply for energising up to two 4/20mA, 2-wire transmitters in the hazardous area and repeating this current in the safe area whilst restricting the transfer of energy from unspecified safe area apparatus to an intrinsically safe circuit by means of the limitation of voltage and current. Four transformers provide galvanic isolation between the hazardous and non-hazardous area circuitry. The output voltage is limited by duplicated sets of zener diodes and the current is limited by resistors.

Connector Terminal CON2

$$U_m = 250V \text{ r.m.s.}$$

The circuit connected to the safe area terminal CON2 is designed to operate from a d.c. supply voltage of up to 35V.

Connector Terminal CON1 pin 2 wrt 3 or
Connector Terminal CON1 pin 5 wrt 6

$$U_o = 28V$$
$$I_o = 93mA$$
$$P_o = 0.65W$$

Each circuit must be considered as a separate intrinsically safe circuit.

The capacitance and either the inductance or the inductance to resistance ratio (L/R) of the load connected to the output terminals must not exceed the following values:

GROUP	CAPACITANCE in μF	INDUCTANCE in mH	OR	L/R RATIO in $\mu H/ohm$
IIC	0.083	4.30		56
IIB	0.650	17.72		210
IIA	2.150	36.02		444

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Report Nos.

98(C)0789

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SPECIAL CONDITIONS FOR SAFE USE

None



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Essential Health and Safety Requirements

ESSENTIAL HEALTH & SAFETY REQUIREMENTS not covered by Standards listed at (9)		
Clause	Subject	Compliance
1.0.1	Principles of integrated explosion protection	Report No 98(C)0789 Clause 6.1.0.1
1.0.2	Analysis of possible operating faults	Report No 98(C)0789 Clause 6.1.0.2
1.0.4	Surrounding area conditions	Report No 98(C)0789 Clause 6.1.0.4
1.0.5	Marking	Report No 98(C)0789 Clause 6.1.0.5
1.0.6	Instructions	Report No 98(C)0789 Clause 6.1.0.6
1.1.3	Changes in characteristics of materials and combinations thereof	Report No 98(C)0789 Clause 6.1.1.3
1.2.1	Design with regard to technological knowledge	Report No 98(C)0789 Clause 6.1.2.1
1.2.2	Components for incorporation or replacement	Report No 98(C)0789 Clause 6.1.2.2
1.2.4	Dust deposits	Report No 98(C)0789 Clause 6.1.2.4
1.2.5	Additional means of protection	Report No 98(C)0789 Clause 6.1.2.5
1.2.7	Protection against other hazards	Report No 98(C)0789 Clause 6.1.2.7
1.3.1	Hazards arising from different ignition sources	Report No 98(C)0789 Clause 6.1.3.1
1.4.2	Withstanding attack by aggressive substances	Report No 98(C)0789 Clause 6.1.4.2
1.5.1	General Requirements for Safety Devices	Report No 98(C)0789 Clause 6.1.5.1
1.5.2	Safety device failure	Report No 98(C)0789 Clause 6.1.5.2
1.6.4	Hazards arising from connections	Report No 98(C)0789 Clause 6.1.6.4
2.1.1	Category 1G	Report No 98(C)0789 Clause 6.2.1.1

19 DRAWINGS

Number	Sheet	Issue	Date	Description
CI4044	1	1	09.98	MTL4044 Parts List
CI4044	2	1	03.99	MTL4044 Circuit Diagram
CI4044	3	1	03.99	MTL4044 Component Layout
CI4044	4	1	10.98	MTL4044 General Assembly
CI4044	5	1	09.98	MTL4044 Internal Construction
CI4044	6	1	03.99	MTL4044 Track Layout
CI4044	7	1	08.98	MTL4044 Transformer windings
CI500-10	1	1	03.99	TFR308 Assembly Details
CI500-10	2	1	03.99	TFR308 Assembly Details
*CI5000-2	1	2	01.98	TFR300 Assembly Details
*CI5000-2	2	2	01.98	TFR300 Assembly Details

*These drawings are held with Certificate No Ex 95C2289/3

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BASEEFA List Keywords
2ISOLBAR



SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE

Equipment or Protective System Intended for use
in Potentially explosive atmospheres
Directive 94/9/EC

Supplementary EC-Type Examination Certificate Number: **BAS99ATEX7061/1**

Equipment or Protective System: **MTL4044 REPEATER POWER SUPPLY, 2 CHANNEL:
4/20mA, FOR 2-WIRE TRANSMITTERS**

Manufacturer: **MEASUREMENT TECHNOLOGY LIMITED**

Address: **Luton, Bedfordshire, LU1 3JJ**

This supplementary certificate extends EC-Type Examination Certificate No. BAS99ATEX7061 to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said Certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This Supplementary Certificate shall be held with the original Certificate.

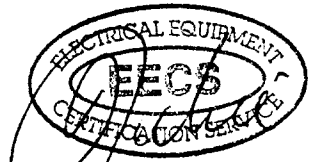
This certificate may only be reproduced in its entirety and without any change, schedule included.

File No: EECS 0703/02/271

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Electrical Equipment Certification Service
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J M CLEAR
DIRECTOR
5 July 1999



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EC-TYPE EXAMINATION CERTIFICATE N° BAS99ATEX7061/1

Description of the Variation to the Equipment or Protective System

VARIATION ONE

To permit minor drawing changes.

Report Nos.

None.

SPECIAL CONDITIONS FOR SAFE USE

None.

Essential Health and Safety Requirements

None.

DRAWING

Number	Sheet	Issue	Date	Description
CI4044	3	2	5.99	MTL4044 Component Layout

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1 **SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use
in Potentially explosive atmospheres
Directive 94/9/EC**

3 **Supplementary EC-Type Examination Certificate Number: BAS99ATEX7061/2**

4 **Equipment or Protective System: MTL4044 REPEATER POWER SUPPLY, 2 CHANNEL:
4/20mA, FOR 2-WIRE TRANSMITTERS**

5 **Manufacturer: MEASUREMENT TECHNOLOGY LIMITED**

6 **Address: Luton, Bedfordshire, LU1 3JJ**

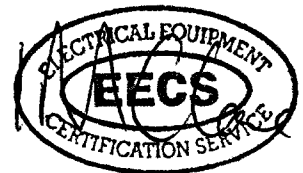
7 This supplementary certificate extends EC-Type Examination Certificate No. BAS99ATEX7061 to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said Certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This Supplementary Certificate shall be held with the original Certificate.

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File No: EECS 0703/02/271

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I M CLEARE
DIRECTOR
23 October 2001



- 13 **Schedule**
- 14 **SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE N° BAS99ATEX7061/2**

Description of the Variation to the Equipment or Protective System

VARIATION 2.1

To permit minor drawing changes.

VARIATION 2.2

To permit the removal of certain components and the alteration of the component layout to form the MTL4044D Repeater Power Supply, 2 Channel: 4/20mA, for 2-Wire Transmitters.

Connector Terminal CON2

$$U_m = 250V$$

The circuit connected to the safe area terminal CON2 is designed to operate from a d.c. supply voltage of up to 35V.

Connector Terminal CON1 pin 2 wrt 3

$$U_o = 28V$$
$$I_o = 93mA$$
$$P_o = 0.65W$$

$$C_i = 0$$
$$L_i = 0$$

Report No.

None.

Special Conditions For Safe Use

None.

Essential Health and Safety Requirements

See original certificate.



- 13 **Schedule**
- 14 **SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE N° BAS99ATEX7061/2**

DRAWINGS

Drawing associated with Variation 2.1

Number	Sheet	Issue	Date	Description
CI4044	3	3	09.01	MTL4044 Component Layout

Drawings associated with Variation 2.2

Number	Sheet	Issue	Date	Description
CI4044-4	1	1	09.01	MTL4044D Parts List
CI4044-4	2	1	09.01	MTL4044D Circuit Diagram
CI4044-4	3	1	09.01	MTL4044D Component Layout
CI4044-4	4	1	09.01	MTL4044D General Assembly
CI4044-4	5	1	09.01	MTL4044D Internal Construction
CI4044-4	6	1	09.01	MTL4044D Track Layout
CI4044-4	7	1	09.01	MTL4044D Transformer windings

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1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres**
Directive 94/9/EC

3 Supplementary EC - Type Examination Certificate Number: **BAS99ATEX7061/3**

4 Equipment or Protective System: **MTL4044 Repeater Power Supply, 2 Channel: 4-20mA, for 2-Wire Transmitter**

5 Manufacturer: **Measurement Technology Limited**

6 Address: **Luton, Bedfordshire, LU1 3JJ**

7 This supplementary certificate extends EC – Type Examination Certificate No. BAS99ATEX7061 to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

The original certificate was issued by The Electrical Equipment Certification Service, Notified Body Number 0600, which retains responsibility for its original documentation. Baseefa (2001) Ltd., Notified Body Number 1180, is responsible only for the additional work relating to this supplementary certificate and any other supplementary certificate it has issued.

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa (2001) Ltd. Customer Reference No. 0703

Project File No. 04/0571

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

Baseefa (2001) Ltd.

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A handwritten signature in black ink, appearing to read "R S SINCLAIR".

R S SINCLAIR
DIRECTOR
On behalf of

Baseefa (2001) Ltd.



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Schedule

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Certificate Number BAS99ATEX7061/3

15 Description of the variation to the Equipment or Protective System

Variation 3.1

To permit the change of marking of model MTL 4044D to the following code: -

⊕ II [I] GD [EEx ia] IIC (-20°C ≤ T_a ≤ +60°C)

16 Report Number

None

17 Special Conditions for Safe Use

None

18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
CI4044-4	4 of 7	2	07.04	General Assembly